

AI-TECH-31E

PATENT APPLICATION
Serial No. 10/784,704AMENDMENTS TO THE CLAIMS:

1. (Currently Amended) An antenna arrangement for detecting a wireless article comprising:
 - a first antenna loop disposed in a first plane for transmitting and/or receiving electromagnetic signals;
 - a first tunable circuit connected to said first antenna loop for coupling at least received signals therefrom;
 - a second antenna loop disposed at least in part in the first plane and overlapping at least in part said first antenna loop therein,
 - wherein said first and second antenna loops overlap at least in part in the first plane and define a detection region adjacent thereto in which said first and second antenna loops transmit and/or receive electromagnetic signals ~~with a component of an associated electromagnetic field in each of three mutually orthogonal directions~~ and in which a wireless article may be;
 - a second tunable circuit connected to said second antenna loop for coupling at least received signals therefrom; and
 - a processor coupled to said first and second tunable circuits for processing at least received signals from said first and second antenna loops for detecting a wireless article in the detection region.
2. (Original) The antenna arrangement of claim 1 wherein at least part of said second antenna loop is in a second plane and the angle at which the first and second intersecting planes intersect is between about 80° and about 100°.
3. (Original) The antenna arrangement of claim 1 wherein said first and second tunable circuits each includes at least one of a tuning circuit and a filter for selectively connecting said first and second antenna loops and said processor.

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4. (Original) The antenna arrangement of claim 1 in combination with a wireless article including a loop antenna and an electronic device including a memory, wherein said processor processes received signals of a type produced by the electronic device and transmitted via the wireless article loop antenna.
5. (Original) The antenna arrangement of claim 1 wherein said processor processes transmitted signals and the received signals, wherein the transmitted signals are coupled by said first and second tunable circuits to said first and second antenna loops to be transmitted thereby.
6. (Original) The antenna arrangement of claim 5 in combination with a wireless article including a loop antenna and an electronic device including a memory, wherein said processor processes transmitted signals of a type received by the electronic device via the wireless article loop antenna and processes received signals of a type produced by the electronic device and transmitted via the wireless article loop antenna.
7. (Original) The antenna arrangement of claim 6 wherein the signals received by the electronic device activate, operate, and/or control the electronic device and cause storing of information in the memory and/or reading of information from the memory.
8. (Original) The antenna arrangement of claim 1 in combination with a utilization system operable in conjunction with transmitted signals and the received signals for toll collection, object identification, stolen object identification, theft prevention, object tracking, package tracking, baggage tracking, medication dispensing and/or usage, medical device dispensing and/or usage, retailing, inventory tracking, factory and/or warehouse inventory, security identification, and/or access control.
9. (Original) The antenna arrangement of claim 1 wherein the detection region